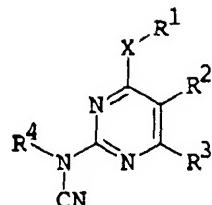


Claims:

1. Pyrimidines of formula I

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in which

R¹ represents hydrogen or

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C₁-C₁₀-alkyl, C₁-C₁₀-haloalkyl, C₂-C₆-alkenyl, C₂-C₆-alky-
nyl, C₄-C₈-alkadienyl, C₁-C₁₀-alkoxy, C₃-C₈-cycloalkyl,
phenyl, or

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5- or 6-membered heteroaryl or 5- or 6-membered heterocy-
cyl, containing one to four nitrogen atoms or one to
three nitrogen atoms and one sulfur or oxygen atom, ortri-C₁-C₆-alkyl-silyl, formyl or C₁-C₁₀-alkoxycarbonyl;

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wherein R¹ groups are unsubstituted or substituted by one
to three groups R^aR^a halogen, nitro, cyano, hydroxy or

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C₁-C₁₀-alkyl, C₃-C₆-cycloalkyl, C₃-C₆-cycloalkenyl,
C₁-C₁₀-haloalkyl, C₃-C₆-halocycloalkyl, C₁-C₁₀-alkoxy,
C₁-C₁₀-haloalkoxy, C₁-C₁₀-haloalkoxy, C₁-C₆-alkoxycar-
bonyl, tri-C₁-C₄-alkylsilyl, phenyl, halo- or dihalo-
35 phenyl or 5- or 6-membered heteroaryl, containing one
to four nitrogen atoms or one to three nitrogen atoms
and one sulfur or oxygen atom;

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R² represents phenyl, C₃-C₆-cycloalkyl or 5- or 6-membered
heteroaryl, containing one to four nitrogen atoms or one
to three nitrogen atoms and one sulfur or oxygen atom,
which are unsubstituted or substituted by one to three
groups R^a;R³ represents hydrogen, halogen or

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C_1-C_{10} -alkyl, C_1-C_{10} -alkoxy, C_1-C_{10} -alkylthio, C_1-C_{10} -alkylamino or di- C_1-C_{10} -alkylamino; which are unsubstituted or substituted by one to three groups R^a ;

5 R^4 represents hydrogen or

C_1-C_{10} -alkyl, C_2-C_6 -alkenyl or C_2-C_6 -alkynyl; which are unsubstituted or substituted by one to three groups R^a ; and

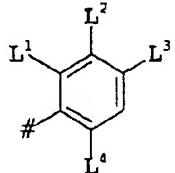
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X represents O, S, NR^5 or a single bond, wherein R^5 represents hydrogen or C_1-C_{10} -alkyl; or

R^1 and R^5 together with the interjacent nitrogen atom form a heterocyclic ring.

2. Pyrimidines of formula I according to claim 1, in which R^2 represents a phenyl group of formula

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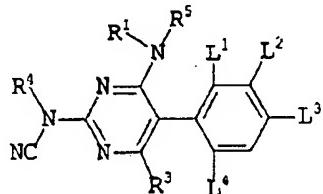


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wherein L^1 through L^4 each independently represent hydrogen, fluorine, chlorine or methoxy.

3. Pyrimidines of formula IA

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IA

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in which R^1 to R^5 have the meaning given in claim 1, and L^1 through L^4 are as defined in claim 2.

4. Pyrimidines according to claim 1 to 3 in which R^3 represents chlorine.

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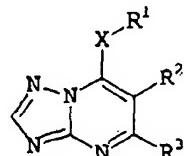
5. Pyrimidines according to claims 1 to 4 in which R^4 represents hydrogen, C_1-C_6 -alkyl or benzyl.

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6. A process for the preparation of pyrimidines of formula I according to claim 1 wherein R⁴ is optionally substituted alkyl, alkenyl or alkynyl by treating compounds of the formula II

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II

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in which R¹ through R³ and X are as defined in formula I; with a base and an alkylation agent of formula III

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R⁴-Y

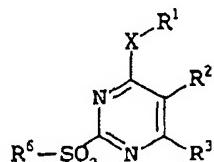
III

in which R⁴ is C₁-C₆-alkyl, C₁-C₆-alkenyl or C₁-C₆-alkynyl; which are unsubstituted or substituted by one to three groups R^a, and Y represents halogen atom.

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7. A process for the preparation of pyrimidines of formula I according to claim 1 wherein R⁴ is C₁-C₆-alkyl, C₁-C₆-alkenyl or C₁-C₆-alkynyl which are unsubstituted or substituted by one to three groups R^a by reacting sulfones of formula VI

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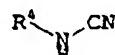


VI

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in which R¹ through R³ and X are as defined in formula I and R⁶ is C₁-C₆-alkyl or C₁-C₆-haloalkyl; with alkylated cyanamides of formula VII

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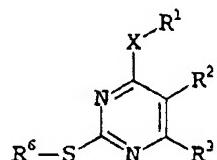


VII

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in which R⁴ is C₁-C₆-alkyl, C₁-C₆-alkenyl or C₁-C₆-alkynyl which are unsubstituted or substituted by one to three groups R^a; wherein sulfones of formula VI are obtained by reacting 2-thiopyrimidinederivatives of formula VIII

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VIII

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in which the variables are as defined in formula VI; with oxidizing agents.

8. Compounds of formulae VI and VIII as defined in claim 7.

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9. A fungicidal composition which comprises a carrier and an effective amount of at least one compound of formula I as defined in claim 1.

10 10. A method of combating fungus at a locus which comprises treating the locus with an effective amount of at least one compound of formula I as defined in claim 1.

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